DOCUMENT RESUME

ED 054 237 UD 011 520

AUTHOR	Gordon, Edmund W.
TITLE	Compensatory Education: Evaluation in Perspective. IRCD Bulletin, Volume 6, Number 5.
INSTITUTION	Columbia Univ., New York, N.Y. ERIC Clearinghouse on the Urban Disadvantaged.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.
PUB DATE	Dec 70
NOTE	8p.
EDRS PRICE	EDRS Price MF-$0.65 HC-$3.29
DESCRIPTORS	*Compensatory Education, *Compensatory Education Programs, *Disadvantaged Youth, *Program Evaluation, Research Design, Research Methodology

ABSTRACT

In this brief discussion of the evaluation of compensatory education, the author analyzes why it has been difficult to discover whether compensatory education has succeeded; in addition, why the causes of success or failure are difficult to assess. In particular, the author points out that the political and economic circumstances of programs make evaluation difficult, and that problems of evaluative research in general, research design, and the static approach to assessment have posed formidable obstacles. Despite the many problems in the design, implementation, and evaluation of compensatory education programs and the equivocal status of much of the evaluation effort, educators are nonetheless constantly called upon to make judgements and policy decisions based upon the experiences so far. The author presents some insights drawn from these research evaluation experiences. (Author/JW)

EDO 54237

IRCD BULLETIN

PUBLICATION OF THE ERIC INFORMATION RETRIEVAL CENTER ON THE DISADVANTAGED

Horace Mann-Lincoln Institute • Teachers College • Columbia University
525 West 120 Street, N. Y., N. Y. 10027

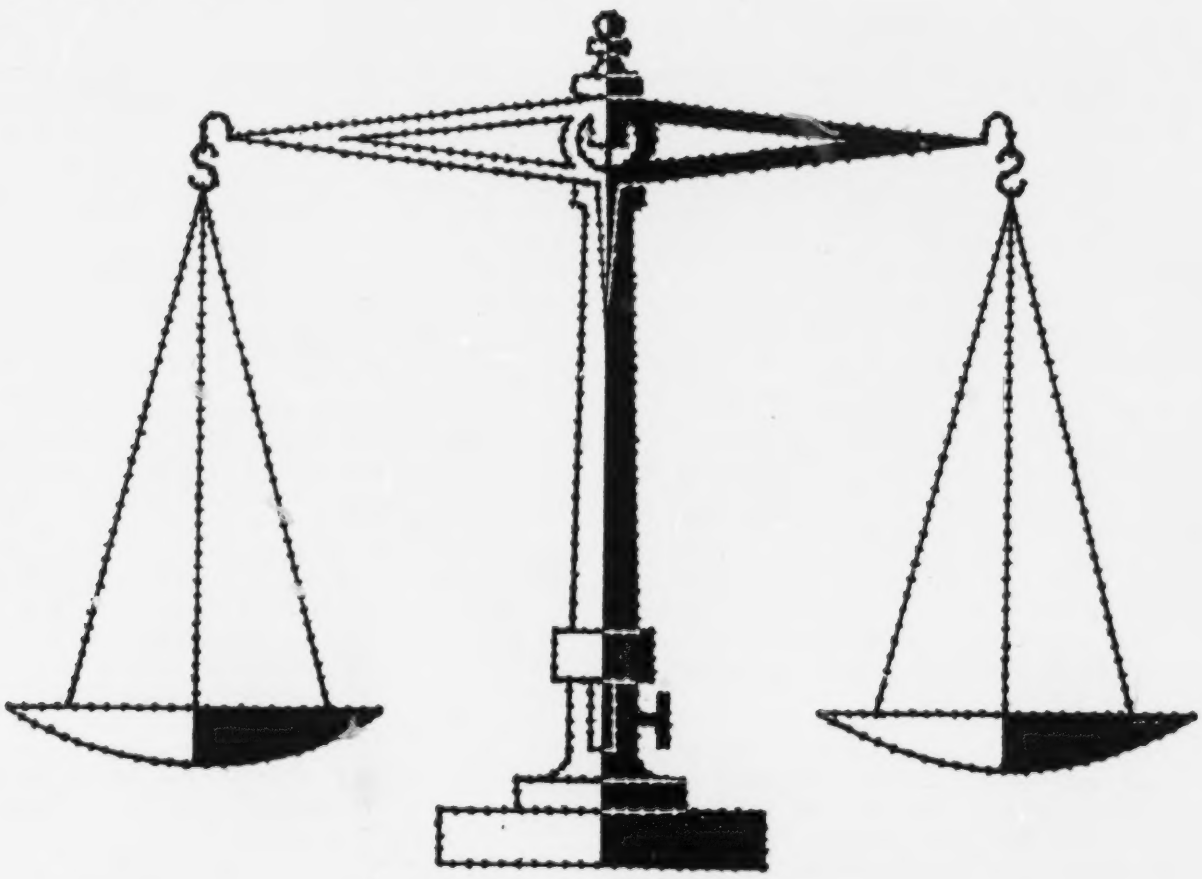
Volume VI, No. 5 December 1970

Compensatory Education:

Evaluation in Perspective

Edmund W. Gordon

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.



UD 011520

Compensatory Education:

Evaluation in Perspective

Edmund W. Gordon

In the mid 1960's the federal government began its large-scale intervention in the development and education of poor children. At the time, a preeminent educational research scientist—one of the most distinguished in the nation—reportedly declined to participate in an evaluation of the government's premier effort. Further clarification of activities and aspirations was necessary, this scholar contended, before criteria could be set and evaluation could occur. His pessimistic view did not deter an army of able, as well as not so able, investigators from rushing to evaluate the impact of Head Start and other programs of compensatory education. This is not to condemn them for their courage, or perhaps even their opportunism or recklessness. The author of this article marched along in the front ranks and even barked out a few of the orders for what proved to be rather futile skirmishes. However, it appears that the pessimistic prophet was by no means wrong—simply unheeded.

During the past five years, more than $10 billion has been invested in the education of poor and minority group members and at least $75 million has been spent on evaluations and special research projects. Despite this enormous expenditure, we are still not able to make definitive statements concerning the value of compensatory education. Even those of us who have been the most enthusiastic advocates of the need for such efforts have to concede that evidence of the value of our efforts is modest, if it exists at all. Some critics are far more harsh in their condemnation of the endeavor. A few have predictably asserted that compensatory education has not worked because it was practiced on a population which is genetically inferior and, hence, incapable of adequate response.

The sparsity of evidence in support of compensatory education may have little to do with its value. Some studies indicate that considerable slippage occurs between the designation of a program as compensatory and the actual implementation of compensating elements in a child's education. As in the case of ethnic integration in public schools, it may be incorrect to conclude that the programs have not worked when in most instances they have not been tried. Yet, it is probably correct that some compensatory education is not very effective. The traditional use of drill and repetition in remedial education is not likely to improve achievement for disadvantaged children. Similarly, increasing guidance contacts from one to two or three per year or even providing more intensive personal counseling as a solitary treatment seems to make little difference. Reducing class size without changing what teachers do seems unimportant, and, similarly, modest increments in available materials have hardly brought about radical improvements. But these and other observations are impressions, partially supported by data, but generally inconclusive. There are few intensive, qualitative and systematic evaluations of compensatory education. Hard data are needed; solid research studies are required as a basis for policy decisions. We have instead an abundance of indefinite, conflicting and confusing studies. The value of compensatory education may be obfuscated, in part, because the practice of evaluative educational research is poor.

The weaknesses in the application of evaluative research to compensatory education partially stem from the complex political and economic circumstances under which these programs were initiated and developed. From their inception, programs involved large expenditures—often made for other than purely experimental educational reasons. Foundations, local and federal governments channeled more than $10 billion into the education of poor and minority group children. Some of the foundation efforts unfortunately seemed also to reflect a desire to establish organizational leadership, a domain of action, or a model program which would be identified with the foundation. The federal programs that succeeded the work of the foundations were subject to a different set of pressures, mainly political concerns. Federal programs were in part responses to the rising demand for a social revolution, for the improvement of human rights, and for the increased development of underprivileged populations. For a while, it seemed more important, politically to act, to be identified with the effort to do something, than to act wisely. There was little time for planning. With large sums of money being spent, and with political objectives clearly the motive, "pork barreling" and politically determined distribution of funds naturally developed. To maintain some semblance of responsible government, the executive branch began to press for evaluation data—to prove favored programs successful and to provide the basis for reducing or eliminating unpopular activities. Initially the legislature was not greatly concerned with evaluation. Rather, the executive branch initiated the evaluation of the impact of compensatory education.

In this context, it is easy to see that large expenditures hastily appropriated for new programs, political pressures for change and a piece of the action, and the demand for immediate proof of impact have complicated the evaluation of the effectiveness of these programs. Evans (Office of Education) and Schiller (Office of Economic Opportunity) discuss the pressures they were under while designing and implementing Head Start:

> *Unfortunately, the political process is not orderly, scheduled, or rational. Crests of public and congressional support for social action programs often swell quickly and with little anticipation. Once legislation is enacted, the pressures on administrators for swift program implementation are intense. In these circumstances—which are the rule rather than the exception—pleas that the program should be implemented carefully, along the lines of a true experiment with random assignment of subjects so that we can confidently evaluate the program's effectiveness, are bound to be ignored.*

The results of such conditions were program and research designs based upon well intended but precipitous decisions. Often when evaluations were attempted after the fact, it was discovered that the original design had been inadequate.

In addition, as Caro observes, the clients of such programs can present a sensitive and difficult situation for the evaluative research. He continues:

> *Even though evaluative researchers may firmly believe that their efforts contribute ultimately to the cause of the poor, minority activists may confront them with great hostility . . . Preoccupied with the immediate, tangible, dramatic, and personal, the minority activist is likely to be impatient with the evaluator's concern with the future, abstract concepts, orderly procedures, and impersonal forces.*

Quite apart from the problems related to the conditions under which programs were initiated and conducted are the problems of evaluative research in general. Here one often finds a low level of expertise and inadequately developed methods. The best educational research scientists often choose to work with basic problems in areas such as child development, learning, linguistics, rather than with evaluative research. Evaluative and field research have only recently gained in respect and demand among educators and the public. Consequently, high demand has been suddenly created in a field with insufficient expertise. Although many good research scientists were drawn into evaluation, they could not readily transfer their research competence to the new situation. Indeed, given their experience in controlled laboratory settings, the problems of evaluative and field research may have been more difficult for them than for some less experienced investigators.

(Continued on page 3)

Compensatory Education (Continued from page 2)

In the conduct of evaluative research, one can distinguish three approaches or three levels of concern. The first attempts to discover whether or not a particular intervention program is effective: Are developmental and learning processes accelerated following the application of a particular teaching method, curriculum, etc.? The second level of concern is comparative: Is the particular intervention more effective than other known methods? The third level is explanatory: What is the nature of the relationship between specific intervention methods and specific associated changes in behavior? Most evaluative research has been directed at the first two levels of concern. The third level, however, is the most important. By answering questions on this level, one can establish a rational basis for action and begin to specify treatments in relation to known characteristics of the children to be served. At the third level the distinction between basic research and evaluative research collapses. The questions posed demand a quality of design which is appropriate to basic research but which can also serve the purposes of evaluation. Unfortunately, evaluative research of this quality has seldom been applied to compensatory education.

All of these approaches are made more complex by technical operational problems. The more compensatory education programs approach laboratory experimental conditions, the more one can discover what, how and why certain educational treatments alter educational underdevelopment. Yet, numerous obstacles stand in the way of establishing the necessary degree of precision and control in isolating variables and discovering the effectiveness of specific treatments.

One such obstacle involves difficulties in the utilization of an adequate method for selecting subjects. As Campbell and Erlebacher point out, "experimental" subjects are often not selected on a random basis. While the "control" group is selected to closely match the experimental group according to various indices, the control group is too often different from the experimental group in crucial aspects, however small a degree. Without random selection of subjects, the results of a program may reflect differences in the development of two populations—differences which are unrelated to the experimental treatment in question. In addition, matching procedures may produce regression artifacts. As for analysis of covariance and partial correlation, such biases may occur both where pretest scores are available and in after-the-fact studies. Campbell and Erlebacher propose true experiments in which randomization of subjects will avoid difficulties that previous quasi-experimental designs have encountered. However, parental objections, coupled with political pressures, have made large-scale application of random assignment of subjects impossible. Controlled comparative studies of this sort are often resisted by communities who will not accept arbitrary selection of subjects for experimentation when everyone wants the benefit of special treatment.

Another difficulty in establishing comparable experimental and control groups can be attributed to the influence of what has been called the radiation effect. Even if the two groups are initially "comparable," the effect of experimentation on the experimental subjects is radiated onto their families, siblings and eventually onto the control subjects if there is any contact, direct or indirect, between these several groups. Susan Grey (1966) reported the confounding impact of preschool on the experimental children's families and even on other members of the community in which they lived. Reporting on the Early Training Project, Grey found that at the end of each school year the controls caught up to the gains made during the summer by the experimental group. However, another control group in a town 60 miles away did not show such gains. In addition, untreated younger brothers and sisters of experimental subjects were observed to make unusual progress, no doubt as a result of the influence of the program on their parents or siblings (Kohlberg, 1966). Obviously, control subjects should be selected in a manner such that they can in no way be affected by the experimental treatment. However, this condition is increasingly difficult to maintain in large-scale field studies and demonstration projects.

In addition, investigators have discovered other effects that are associated with an intervention program—efforts which again are not direct results of the treatment itself. Rosenthal reported that a teacher's expectations can have an important influence on the performance of students. Shephard reported a similar experience in the early stages of his work in St. Louis. Where the teacher's expectation of the child's performance is high, the child is likely to show high achievement. Where expectations are low, achievement tends to be low. Consequently, in any compensatory education program, the expectations of the subjects' teachers may influence their subsequent performance. The Hawthorne effect, in which the mere fact of experimentation or altered learning conditions may cause a temporary change in performance, unrelated to the specific intervention method applied, can also color the results. In the evaluation of compensatory education, such interferences have not been identified or controlled for; hence the real consequences of the various treatments cannot be determined from these studies.

There are still more problems referrable to evaluative research design which confuse, distort or limit the initial data as well as subsequent findings. Most evaluations of compensatory education studies depend excessively on static variables and quantitative measures to the neglect of the process variables and the qualitative analysis of behavior, circumstances and conditions. This dependence on quantitative measures of status to the neglect of qualitative study of process not only opens these works to questions related to the validity of the measurement instruments; it also ignores the growing appreciation of situational and transactional factors as determinants of function. Compensatory education programs under study include and affect a wide variety of independent and dependent variables which are insufficiently accounted for in the more narrowly designed evaluation studies that have dominated the field to date.

This rather static approach to assessment has led investigators to view pupil characteristics which differ from some presumed norm as negative, as well as to consider any correlation between these negative characteristics and learning dysfunction as support for a deficits theory of intervention. In practice this has meant that researchers see all differences between the target populations and the standard group as deficits to be overcome rather than characteristics to be utilized and developed.

Relationships between stereotypical and fairly static input and output variables (usually isolated in pairs) are investigated; no attention is paid to the complex dialectic relationships between patterns of dependent variables and patterns of independent variables, many of which may be idiosyncratic to individuals and situations. These inadequate attempts at the assessment and treatment of pupil characteristics are often accompanied by an even less adequate appraisal of program variables. In practically all of the so-called national impact studies and most of the evaluation of specific programs little or no attention is paid to the fact that intervention treatment is uneven and control of that treatment almost nonexistent. When national impact data are pooled we could easily have results which show no effect, if the effect of specified programs with positive impact is cancelled out by other programs with no positive effect. Even more serious is the apparent disregard of our growing conviction that individual pupils respond differentially to treatments. When mean changes in status are used as the indices to outcome, again we may have negative responders cancelling positive responders to indicate no effect-even though the treatment may be highly effective for specific individuals under specific circumstances.

Several possible explanations have been advanced to illustrate how these confusing data can be interpreted to demonstrate the programs' ineffectiveness. The most extreme is the theory that the subjects involved are simply genetically inferior and not able to be brought up to hoped-for standards. Those who have attempted to advance such hypotheses have been blasted from all sides for the extremely questionable nature of their scientific "support," as well, of course, as for the dubious social value of advancing such theories at this point in the society's development, when they cannot be adequately proven.

However, whatever the range of possible interpretations of apparently discouraging data, what cannot be ignored is that far too many children from economically or ethnically disadvantaged groups are failing to master the traditional learning tasks of schooling. The problem

(Continued on page 4)

Compensatory Education (Continued from page 3)

is not only tragic, but staggeringly complex. Perhaps the most important response to the discouraging data presented by many evaluation reports, after allowing for many of the research problems already discussed, is a rigorous examination of the suitability of what is actually taking place in the schools.

Public schools as social institutions have never had to assume responsibility for their failures. Only recently have observers begun to view and describe objectively some of the horrors that are perpetrated in the name of public education. We must come to grips with the problem of the utterly stultifying atmosphere of many classrooms, with the way in which rote learning and repetition discourage *real* learning; and we must also realize that discipline for discipline's sake serves the purpose of creating artificial order, but at the same time produces dull automatons instead of eager students, or turns the inmates of public schools against education, to their lifelong detriment.

Even where extraordinary programs of compensatory education have brought about some beneficial results, larger social factors may negate these results in the long run. Outside the classroom, disadvantaged children confront a society that is hostile to their healthy development. Learning in structured situations may be irrelevant in the context of their life outside the school. There is some evidence to suggest that ethnic, economic, or social integration does have beneficial effects on children whose background results in such school problems. Achievement levels have been shown to rise after desegregation in many schools, although the exact interplay of reactions leading to this result has not been conclusively determined. For example, improved teacher morale or other improved conditions brought about by the process of desegregation may result in an overall increase in the quality of education throughout the system. Other evidence points to the conclusion that integration on a social status group basis has beneficial effects for disadvantaged children when the majority of their peers in the school are from higher status groups. Even these results, however, are not sufficiently conclusive to provide a legitimate basis for large-scale generalizations. The problem is further complicated by the new renaissance in cultural nationalism among ethnic minorities, a movement which affects any assumptions to be made about ethnic integration and education. In a society which has alternately pushed ethnic separation or ethnic amalgamation and which has never truly accepted cultural and ethnic pluralism, blacks, chicanos, Puerto Ricans, and native Americans are insisting that the traditional public school is guilty not only of intellectual and social but also of cultural genocide for their children. There are class and caste conflicts to which insufficient attention has been given in the organization and delivery of educational services. If cultural and ethnic identification are important components of the learning experience, to ignore or demean them is poor education, at best. Even if these factors are sufficiently taken into account in the school, we are far from any guarantees that the society will honor such values outside the classroom. It is not at all clear that intensive, short-term in-school treatment can counter the negative, external forces working upon disadvantaged populations.

The schools face a difficult challenge if they are to make learning an exciting and stimulating experience, relevant and effective, for all their students from all cultural and social backgrounds. However, even meeting these criteria will not be enough. Educators still face the problem of matching the developmental patterns, learning styles and temperamental traits of individual learners to the educational experiences to which they are exposed. Many researchers have concentrated on differences in level of intellectual function, a concern reflected in the heavy emphasis on intelligence testing and the placement, even "tracking", of pupils based on these tests. This tradition has emphasized quantitative measurement, classification, and prediction to the neglect of qualitative measurement, description and prescription. These latter processes are clearly essential to the effective teaching of children who come to the schools with characteristics different from those of both their teachers and the other children to whom most teachers are accustomed. Research data indicate wide variations in patterns of intellectual and social function across and within sub-populations. Variations in function within privileged groups may be less important because of a variety of environmental factors which support adequate development and learning; however, among disadvantaged populations—where traditional forms of environmental support may be absent—attention to differential learning patterns may be crucial to adequate development. Understanding the role of one set of behaviors as facilitators of more comprehensive behaviors is at the heart of differential analysis of learner characteristics and differential design of learning experiences. Schooling for disadvantaged children—indeed, for all children in our schools—comes nowhere near meeting these implied criteria. Assessment technology has not seriously engaged the problem. Curriculum specialists are just beginning to face the task, in some of their work in individually prescribed learning.

The problems of social disadvantage in the society at large, and the failure of the schools to mold their practices to cultural differences and individual learning styles are not the only obstacles to successful compensatory education. Social disadvantagement gives rise to a variety of harmful health and nutritional problems which militate against healthy development and adequate utilization of educational opportunities. It is becoming increasingly recognized that low income results in poor health care and frequent malnutrition; these disadvantages are related to high risks for the pregnant mother and fetus, and for the child after birth, in terms of mortality or maldevelopment. Poor health conditions may result in either a direct impairment of the nervous system or an indirect interference with the learning process by a low level of energy or high level of distractibility. Such health-related conditions probably have a crucial effect on school and general social adjustment. It has now been shown that impaired health or organic dysfunction can influence school attendance, learning efficiency, developmental rate as well as personality development. Clearly, adequacy of health status and adequacy of health care in our society are influenced by adequacy of income. Thus poverty results in a number of conditions directly referrable to school success and to development in general.

Despite the many problems in the design, implementation and evaluation of compensatory education programs and the equivocal status of much of the evaluation effort, we are nonetheless constantly called upon to make judgments and policy decisions based upon the experiences so far. There are useful insights to be drawn from these experiences:

1. The search for the best or the generic treatment is clearly a futile search. Problems of human development and learning are so complex and conditions of life so varied that the chances of finding a curriculum which is universally superior are quite modest. In well designed and conducted studies comparing different approaches to early childhood education, differences in curriculum orientation seemed less important than the following factors: systematic planning, clear objectives, intensity of treatment, attention to individual needs and learning patterns, opportunities for individual and small group interaction, support in the home environment for the learning experiences provided at school and the presence of personnel committed to the pedagogical procedures prescribed. It seems that as these conditions are approached, no matter what the content or method, personal development and content mastery are advanced. Hard data in support of these conclusions are scarce since few studies have been designed to be particularly sensitive to this constellation of variables. Nonetheless logical and impressionistic evidence mounts in support of the validity of these observations.

2. Although the concept of individual differences has been with us for a long time, individualization is underrepresented in programs of treatment and evaluation of programs. Confusing interpretation of evaluation data may occur because of this neglect and the countertendency to generalize too freely. In a few longitudinal studies where impact on individuals (or on youngsters identified as having been exposed to known treatments over time) has been investigated, emerging achievement patterns are encouraging. There appear to be insufficient studies of highly sophisticated programs of individually prescribed learning experiences to draw definitive conclusions. Yet some of the more generalized individually prescribed instructional programs do seem to be widening the range of achievement among pupils so exposed. These generalized IPI programs are probably not the answer even though they represent an advance in educational technology. The

(Continued on page 5)

Compensatory Education (Continued from page 4)

true matching of pace, content and conditions of learning to the specific characteristics of each learner is not yet a part of even our highly experimental work. Insufficient progress in the qualitative analysis of learning behavior may be partially responsible for this situation. Such analysis is clearly prerequisite to any serious effort at achieving sophistication in the individualization of instruction and learning.

3. The absence of broader representation and utilization of the social sciences in the evaluation of compensatory education has contributed to the neglect of social psychological, social and political factors in these programs. Yet as important as the strictly pedagogical problems are, the politics of education delivery systems, the social psychology and political economy of education and the sociology of knowledge and learning share the stage with pedagogy in accounting for the success or failure of compensatory education. Whether we are considering the role of pupils in directing their own learning or the roles of parents and community in directing school policy, the influence of involvement, participation, commitment and values is so critical as to render much of our evaluation and our treatment useless unless we give these factors greater consideration. In the very inadequate studies of several informal schooling situations (storefront academies and the adult education programs of groups like the Black Panthers, Black Muslims, Young Lords, etc.) the blending of control, participation, politics, values and demonstrated change in opportunity structure begin to appear as important factors in educational rehabilitation. Unfortunately, the research and evaluation data that we have are not sufficient to erect guidelines or to draw firm conclusions but again impression and logic suggest that we should look to these concerns in our programs and evaluation.

This Bulletin was prepared pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official Office of Education position or policy.

NEW PRICE SCHEDULE
CURRENT INDEX TO JOURNALS IN EDUCATION

Since January 1, 1971, the following price schedule has been in effect for CIJE:

Monthly (12 issues)	$39.00
Semiannual and Annual	$40.00
Monthly, Semiannual & Annual	$74.00
Annual (purchased singly)	$29.00
Single monthly copies continue to be	$ 3.50 each

CIJE is a monthly cataloging and indexing publication for journal and periodical literature in the field of education. It is available from:

CCM Information Corporation
(A subsidiary of Crowell Collier and Macmillan, Inc.)
866 Third Avenue, Room 1126
New York, New York 10022.

HOW TO ORDER ERIC DOCUMENT REPRODUCTIONS

RIE BACK COLLECTIONS

Name	Total Fiche	Unit Price	Collection Price
Reports in Research in Education for 1966 & 67	4,426	$0.89	$ 394.00
Reports in Research in Education for 1968	13,326	$0.89	$1,187.00
Reports in Research in Education for 1969	15,899	$0.89	$1,416.00
Reports in Research in Education for 1970	16,188	$0.89	$1,441.00

SPECIAL COLLECTIONS

Name	Total Fiche	Unit Price	Collection Price
ERIC Catalog of Selected Documents on the Disadvantaged	2,740	$0.14	$ 384.00
Office of Education Research Reports, 1956-65	3,315	$0.14	$ 465.00
Selected Documents in Higher Education	1,258	$0.14	$ 177.00
Pacesetters in Innovation, Fiscal Year 1966	1,185	$0.14	$ 166.00
Pacesetters in Innovation, Fiscal Year 1967	1,437	$0.14	$ 202.00
Pacesetters in Innovation, Fiscal Year 1968	919	$0.14	$ 129.00
Manpower Research, Inventory for Fiscal Years 1966 & 67	653	$0.14	$ 92.00
Manpower Research, Inventory for Fiscal Year 1968	364	$0.14	$ 51.00
Manpower Research, Inventory for Fiscal Year 1969	473	$0.14	$ 67.00

Individual Orders

Microfiche (MF)

Microfiche for all reports announced in Research in Education as available from EDRS are available regardless of document size at $0.65 per title.

Hard Copy (HC)

Full Size paper copies are available according to the following graduated pricing table:

No. of Pages	Price
1-100	$3.29
101-200	6.58
201-300	9.87
Each additional 1-100 page increment	3.29

There is no handling charge. However, payment must accompany all orders under $10.00. Orders must be in writing, stating the ED numbers, type of reproduction (MF or HC), and the number of copies desired.

Address all orders to:

ERIC Document Reproduction Service
P.O. Drawer O
Bethesda, Maryland 20014

The above information represents a price change for all ERIC documents which became effective on February 21, 1971. All documents cited in the ERIC system in the past as well as those which will be cited in the future are governed by the new pricing. Appropriate adjustments should be made in all prices listed prior to the May 1971 issue of Research in Education.

(Continued on page 6)

(Continued from page 5)

ERIC PUBLICATIONS

	GPO Order Number and Price	
Research in Education	Yearly Subscription	
Monthly Abstract Journal. Please send subscription orders separately from orders for other publications listed below.	Domestic	$21.00
	Foreign	$26.25
	Single Issues	$ 1.75
Research in Education, 1967 Annual Index Reports	(Order by title)	$ 3.25
Research in Education, 1967 Annual Index Projects	(Order by title)	$ 1.50
Cumulative Indexes of first 14 issues of RIE November 1966-December 1967, 2,349 titles		
Research in Education, Annual Index Reports January-December 1968, 8,803 titles	(Order by title)	$ 8.25
Research in Education, Annual Index Reports January-December 1969, 10,453 titles	(Order by title)	$ 6.25
Thesaurus of ERIC Descriptors, Second Edition To be used in searching the subject indexes of RIE and other ERIC publications.	OE-12031-69	$ 3.25
Rules for Thesaurus Preparation, Sept. 1969	OE-1204	$ 0.20
Office of Education Research Reports, 1956-65, Resumes Abstracts of 1,214 research reports received by the Bureau of Research before the start of publication of RIE.	OE-12029	$ 1.75
Office of Education Research Reports, 1956-65, Indexes Indexes, reports by author, institution subject, and report numbers.	OE-12028	$ 2.00
ERIC Catalog of Selected Documents on the Disadvantaged. Number and Author Index 1,746 documents dealing with the special educational needs of disadvantaged, to 1966.	OE-37001	$ 0.65
ERIC Catalog of Selected Documents, Subject Index, to 1966.	OE-37002	$ 3.00
Pacesetters in Innovation, Fiscal Year 1967 Résumés of projects to advance creativity in education approved during fiscal year 1967 indexed by subject, local education agency, and project number. 907 documents covered.	OE-20103-67	$ 2.50
Pacesetters in Innovation, Fiscal Year 1968	OE-20103-68	$ 2.50
Pacesetters in Innovation, Fiscal Year 1969	OE-20103-69	$ 5.00
Manpower Research: Inventory for Fiscal Years 1966 and 1967 Collection by Intragency Committee on Manpower Research covering 392 documents.	OE-12036	$ 2.75
Manpower Research: Inventory for Fiscal Year 1968	OE-12036-68	$ 1.75
Manpower Research: Inventory for Fiscal Year 1969	OE-12036-69	$ 1.75
Selected Documents in Higher Education, Number and Subject Index Covers 845 documents.	Not available from GPO Order from EDRS/LEASCO ED 012 110 $3.29 (HC) $ 0.65 (MF)	
How To Use ERIC A graphic aid to the use of ERIC system.	OE 12037-B—$ 0.25	

Purchase from: Superintendent of Documents
U. S. Government Printing Office
Washington, D. C. 20402

The citations in the following bibliography listed with ED numbers are available from the ERIC Document Reproduction Service (EDRS), P.O. Drawer O, Bethesda, Maryland 20014, unless otherwise noted. Each available document may be obtained in either microfiche (MF) or hard copy (HC). Microfiche is 4x6 inch sheets of film which require special readers to enlarge the print. Hard copy is paper photo copy of the original documents. Microfiche copies cost $0.65 per title. Hard copy prices are determined by the number of pages the document contains. The schedule is as follows:

No. of Pages	Price
1-100	$ 3.29
101-200	6.58
201-300	9.87
301-400	13.16
401-500	16.45
Each additional 1-100 page increment	3.29

When ordering from EDRS, requests must be in writing, stating the ED numbers desired, type of reproduction (MF or HC) and number of copies. There is no handling charge. Orders under $10.00, however, must be accompanied by payment.

Journal citations, publishers, or other sources are given for those items without ED numbers. Many of these items are available in libraries or may be obtained through a local book distributor. All documents, with or without ED numbers, may also be read at the ERIC Information Retrieval Center on the Disadvantaged, Teachers College, Columbia University.

Some References on Evaluating Compensatory Education Programs

Beagle, Simon. **Evaluating More Effective Schools: A Survey of Research on the More Effective Schools Plan.** Washington, D.C.: American Federation of Teachers, 1969. 7p. ED 044 471

Bloom, Benjamin S. "Testing Cognitive Ability and Achievement." In Handbook of Research on Teaching, N. L. Gage, ed. Washington, D.C.: American Educational Research Association, 1963.

Bloom, Benjamin S., et al., eds. **Taxonomy of Educational Objectives: The Classification of Educational Goals.** New York: Longmans, Green, 1956, 1964.

Campbell, D. T. "Factors Relevant to the Validity of Experiments in Social Settings," **Psychological Bulletin**, 54: 297-312, 1957.

Campbell, D. T. Reforms as Experiments," **American Psychologist**, 24: 409-29, 1969.

Campbell, Donald T., and Albert Erlebacher, "How Regression Artifacts in Quasi-Experimental Evaluations Can Mistakenly Make Compensatory Education Look Harmful," **Disadvantaged Child**, Vol. III, Jerome Hellmuth, Ed., New York: Brunner/Mazel, Inc., 1970.

Caro, Francis G. "Issues in the Evaluation of Social Programs," **Review of Educational Research**, Vol. 41, No. 2. April 1971.

Chalupsky, A., et al. "Evaluating Educational Programs: A Symposium," **Urban Review**, 3: 4, 4-22, February 1969. (Participants: Albert Chalupsky, James S. Coleman, Henry S. Dyer, David G. Hawkridge, John Mann, Martin Mayer, Peter H. Rossi, Michael Scriven, Edward A. Suchman, J. Wayne Wrightstone, Edward Wynne.)

Columbia University, New York. Horace Mann-Lincoln Institute for School Experimentation. **A Program Evaluation Design for the Experimental Educational Program.** 1969.

Cronbach, Lee J. "Judging Performance," in **Educational Psychology**, 2nd edition. New York: Harcourt, Brace, and World, Inc., 1963.

Dentler, R. A. "Urban Eyewash: A Review of Title I/Year II," **The Urban Review**, 3: 432-33, February 1969.

Evans, John W., and Jeffrey Schiller, "How Preoccupation with Possible Regression Artifacts Can Lead to a Faulty Strategy for the Evaluation of Social Action Programs: A Reply to Campbell and Erlebacher," **Disadvantaged Child**, Vol. III, Jerome Hellmuth, Ed., New York: Brunner/Mazel, Inc., 1970.

Fox, David J. **Expansion of the More Effective Schools Program. Final Report.** New York: Center for Urban Education, 1967. 183p. ED 014 525

Gordon, Edmund W., et al. **Committee on Experimental Program to Improve Educational Achievements in Special Service Schools. Final Report.** New York: Teaching and Learning Corporation, 1968, 188p. ED 021 943

(Continued on page 7)

(Continued from page 6)

Gray, Susan, et al., **Before First Grade: The Early Training Project for Culturally Disadvantaged Children**, New York: Teachers College Press, 1966.

Hawkridge, David G., and others. **Foundations for Success in Educating Disadvantaged Children. Final Report.** Palo Alto, California: American Institute for Research in Behavioral Sciences, 1968. 112p. ED 037 591

Hawkridge, David G., and others. **A Study of Further Selected Exemplary Programs for the Education of Disadvantaged Children, Final Report.** Palo Alto, California: American Institute for Research in Behavioral Sciences, 1969. 181p. ED 036 668

Hawkridge, David G., and others. **A Study of Selected Exemplary Programs for the Education of Disadvantaged Children. Final Report.** Palo Alto, California: American Institute of Research in Behavioral Sciences, 1968. Part I: 118p., ED 023 776. Part II: 341p., ED 023 777

Hunt, J. McV. "Has Compensatory Education Failed? Has It Been Attempted?" **Harvard Educational Review**, 39: 278-300, 1969.

Karnes, Merle B., et al. "The Effects of Four Programs of Classroom Intervention on the Intellectual and Language Development of Four-Year-Old Disadvantaged Children," **American Journal of Orthopsychiatry**, 40: 1, 58-70, January 1970.

Klaus, Rupert A. and Susan W. Gray. **The Early Training Project for Disadvantaged Children: A Report After Five Years. Monographs of the Society for Research in Child Development**, Vol. 33, No. 4, 1968.

Kohlberg, Lawrence, "Assessment of a Montessori Program," delivered at the American Education Research Association, New York, 1966.

McDavid, John W. **Project Head Start: Evaluation and Research Summary**, 1965-67. Washington, D.C.: Project Head Start, Division of Research and Evaluation, 1967.

McDill, Edward L., et al. **Strategies for Success in Compensatory Education: An Appraisal of Evaluation Research.** Baltimore, Maryland: Johns Hopkins Press, 1969.

Posner, J. **Evaluation of "Successful" Pre-Title I Projects in Compensatory Education.** Washington, D.C. U.S. Office of Education, Office of Planning and Evaluation, 1968.

Rosenthal, Robert, and Lenore Jacobson, **Pygmalion in the Classroom: Teacher Expectation and Pupils' Intellectual Development**, New York: Holt, Rinehart and Winston, Inc., 1968.

Rossi, Peter H. "Practice, Method, and Theory in Evaluating Social-Action Programs," in **On Fighting Poverty**, James L. Sundquist, ed. New York: Basic Books, Inc., 1969.

Schwager, Sidney. **An Analysis of the Evaluation of the More Effective Schools Program Conducted by the Center for Urban Education.** New York: United Federation of Teachers, More Effective Schools Committee, 1967. 23p. ED 014 526

Shephard, Samuel and others. **"How Should We Educate the Deprived Child,"** Washington, D.C.: Council for Basic Education, February 1965, 36p. ED 022 794

Suchman, Edward A. **Evaluative Research: Principles and Practice in Public Service and Social Action Programs.** New York: Russell Sage, 1967.

Tyler, Ralph, et al., eds. **Perspectives in Curriculum Evaluation.** Chicago, Illinois: Rand McNally, 1967.

U.S. Office of Education, Washington, D.C. **Education of the Disadvantaged: An Evaluative Report on Title I, Elementary and Secondary Education Act of 1965, Fiscal Year 1968.** 1970. 274p. ED 047 033.

Wallen, Norman E. and Robert M. W. Travers. "Analysis and Investigation of Teaching Methods." In **Handbook of Research on Teaching**, N. L. Gage, ed. Washington, D.C.: American Educational Research Association, 1963.

Weikart, David P. Comparative Study of Three Preschool Curricula. Paper presented at the biennial meeting of the Society for Research in Child Development, Santa Monica, California. March 1969. ED 042 484

Weikart, David P., et al. **The Cognitively Oriented Curriculum: A Framework for Preschool Teachers. Final Report.** Ypsilanti, Michigan: High/Scope Educational Research Foundation; Ypsilanti Public Schools, 1970. (Vol. I: 268p. ED 044 535; Vol. II: Longitudinal Results of the Ypsilanti Perry Preschool Project, 189p., ED 044 536)

Westinghouse Learning Corp., New York; Ohio University, Athens. **The Impact of Head Start: An Evaluation of the Effects . . . on Children's Cognitive and Affective Development.** 1969. (Executive Summary is available from EDRS as ED 036 321, 12p.)

Wrightstone, J. Wayne, et al. **Evaluation of the Higher Horizons Programs for Underprivileged Children.** New York City: Board of Education, Bureau of Educational Research, 1964. 298p. ED 001 787

Additional Sources of Information

Project Head Start has funded more than fifty evaluation studies of preschool education. Like the evaluation studies cited above, these vary in quality: most of them have been identified by the ERIC Clearinghouse on Early Childhood Education, University of Illinois, 805 West Pennsylvania Avenue, Urbana, Illinois 61801, and are available through the ERIC system.

The Center for the Study of the Evaluation of Instructional Programs, at the University of California at Los Angeles, concentrates on the theory and practice of evaluation of instructional programs in school settings. Its publications are also available through the ERIC system, and will be found in **Research in Education.**

The University of Illinois has for a number of years maintained a research center concerned with curriculum evaluation. Inquiries may be addressed to Dr. J. Thomas Hastings, Director, Center for Instructional Research and Curriculum Evaluation, 270 Education Building, College of Education, University of Illinois, Urbana, Illinois 61801.

ERIC-IRCD PUBLICATIONS

Single copies of the following publications are available free of charge from ERIC-IRCD, Box 40, Teachers College, Columbia University, New York, New York 10027.

IRCD BULLETINS

Vol. II, No. 1. **Programs and Prospects for Out-of-School Youth: School Dropouts and High School Graduates**, Gertrude S. Goldberg. 10p., January 1966.

Vol. II, No. 2. **Compensatory Practices in Colleges and Universities**, Doxey A. Wilkerson, 4p., March 1966.

Vol. II, No. 4A. **Contingency Management**, Lloyd E. Homme; **Shyness, Non-Speaking and the PPVT**, Robert T. Reeback. 4p., 1966.

Vol. IV, No. 5 – Vol. V, No 1. **Decentralization and Educational Reform**, Edmund W. Gordon, Jason Epstein, Edward P. Gottlieb, and I. F. Stone. 22p., November 1968 – January 1969.

Vol. V, No. 3. **Relevance and Pluralism in Curriculum Development**, Edmund W. Gordon, Adelaide Jablonsky, Lebert Bethune, Richard G. Hatcher, and Ossie Davis, 23p., Summer 1969.

Vol. VI, Nos. 1 & 2. **Media for Teaching Afro-American Studies**, Adelaide Jablonsky. 23p., Spring-Summer 1970.

Vol. VI, No. 3. **Bodies, Brains and Poverty: Poor Children and the Schools**, Joan Dye Gussow; **Recommendations for Child Health Care Spelled Out in Special Academy Report**, American Academy of Pediatrics, 20p., September 1970.

Vol. VI, No. 4. **Access and Appraisal: Continuing Education, Higher Education, Career Entry.** The Report of the Commission on Tests to the College Entrance Examination Board. 11p., November 1970.

THE STUDY OF COLLEGIATE COMPENSATORY PROGRAMS FOR MINORITY GROUP YOUTH

The College Readiness Program: A Program for Third World Students at the College of San Mateo, California, Carol Lopate. 36p., November 1969.

A Selected ERIC Bibliography on Pre-College Preparation of Students from Disadvantaged Backgrounds, Effie M. Bynum. 30p., May 1969.

A Syllabus for the Study of Selective Writings by W. E. B. DuBois, Walter Wilson, 47p., March 1970.

(Continued on page 8)

(Continued from page 7)

URBAN DISADVANTAGED SERIES

No. 8 **Immigrants and the Schools: A Review of Research**, David K. Cohen 21p., December 1969.

No. 12 **The Neighborhood Youth Corps: A Review of the ERIC Literature**, Adelaide Jablonsky and Regina Barnes. 23p., March 1970.

No. 13 **The Job Corps: A Review of the ERIC Literature**, Adelaide Jablonsky, 33p., March 1970.

No. 14 **ERIC-IRCD Resources on the School Dropout**, Adelaide Jablonsky, 27p., April 1970.

No. 15 **Guidance in an Urban Setting**, Edmund W. Gordon. 16p., June 1970.

No. 17 **Significant Trends in the Education of the Disadvantaged**, Edmund W. Gordon. 24p., August 1970.

No. 18 **Mutability of Intelligence and Epidemiology of Mild Mental Retardation**, Zena Stein and Mervyn Susser. 41p., September 1970. (Reprinted from Review of Educational Research, Vol. [illegible], No. 1, February 1970.)

No. 19 **Principal Sources for the Study of the Mutability of Intelligence and the Epidemiology of Mild Mental Retardation**, Ellen R. Goldstein, 71p., September 1970.

INFORMATION RETRIEVAL CENTER ON THE DISADVANTAGED

The **IRCD BULLETIN**, a publication of the ERIC Information Retrieval Center on the Disadvantaged, is published five times a year and usually includes status or interpretive statements, book reviews, and a selected bibliography on the center's special areas. Persons may ask, in writing, to be placed on the subscription list. The center also publishes the ERIC-IRCD Urban Disadvantaged Series and the Collegiate Compensatory Education Series, a series of bibliographies, reviews, and position papers. Numbers in this series will be announced in the **IRCD BULLETIN** and can be obtained by request. Subject areas covered by IRCD include the effects of disadvantaged environments; the academic, intellectual, and social performance of disadvantaged youth; programs and practices which provide learning experiences to compensate for the special problems and build on the characteristics of the disadvantaged; programs related to economic and ethnic discrimination, segregation, desegregation, and integration in education; and materials related to ethnic studies.

The center is operated under a contract with the Educational Resources Information Center (ERIC) of the U.S. Office of Education and receives additional funds from the College Entrance Examination Board, Teachers College, Columbia University, the Division of Equal Educational Opportunities of the U.S. Office of Education, and other agencies for special services.

Edmund W. Gordon, *Director* — **Erwin Flaxman**, *Associate Director*

Letter to the Editor

April 19, 1971

Edmund W. Gordon, Editor
ERIC-IRCD BULLETIN
Teachers College, Columbia University
525 West 120 Street
New York, N. Y. 10027

Dear Sir:

I was interested in reading your IRCD Bulletin on "Media for Teaching Afro-American Studies" (volume VI, Spring, Summer 1970). It is of particular interest to me since I have been researching in that area since 1965 and have recently written a book on the subject – **BLACK PIONEERS OF SCIENCE AND INVENTION**, Harcourt, Brace & World, 1970.

On pages ten and eleven of your Bulletin, you review the record album "Black Contributors to American Culture". In reviewing the record on Dr. Charles Drew, you state that he was denied a blood transfusion after being gravely injured in the South. I have come across this "information" in several places but no where was I able to document this accusation. When I spoke to his widow who now lives in Washington, D. C., she denied it. Do you have any documentation as to the fact that this actually happened? If so, I would appreciate the sources since I feel that this point should be cleared up once and for all. I would hesitate to print this if it is not really so.

You refer to Norbert Rillieux as a slave scientist. This is not correct. Rillieux was born free and was never a slave in his life. In fact he was sent to Paris for his schooling because there was no room in New Orleans for a free Negro at that time. Much of his unhappiness came from being a free Negro in a slave state.

Daniel H. Williams did not operate on the heart. He was the first surgeon to successfully open the chest and operate in it. Actually he sewed up the pericardium, the sac surrounding the heart. He did not sew up the heart itself. However his was a pioneering venture in surgery.

Elijah McCoy is known for his invention of the lubricating cup. Thereafter, railroad engines, industrial machines, etc. were all equipped with his lubricating cups and were therefore known as the "real McCoy".

Yours for accuracy,

Louis Haber, Ed.D.
Woodlands High School
Warburg Campus
Hartsdale, New York 10530

ERIC-IRCD BULLETIN
Edmund W. Gordon — Editor

Teachers College
Columbia University
525 West 120th Street
New York, New York 10027

Volume VI, No. 5

ADDRESS CORRECTION REQUESTED

☆ U.S. GOVERNMENT PRINTING OFFICE: 1971—715—028/32—72 REG. III